

CLAIMS

1. Lifting platform for motor vehicles,
 - with two cylinder tubes (3) which move synchronously with one another in the vertical direction (17),
 - with a hydraulically operated lifting unit (18) for each cylinder tube (3),
 - with a mechanical transverse support (5) for the two lifting units (18) so as to ensure the synchronization of the two cylinder tubes (3) and to prevent them from rotating about their longitudinal axis,
 - with a mechanical anti-lowering means (10, 16) which prevents unintentional lowering in the event of a pressure loss,characterized in that each lifting unit (18) is equipped with a standing, hollow plunger piston (4) which is supported at the base, in the interior of which compressed air (26) and a hydraulic fluid (27) are located, the internal cavity of which is designed as a pressure vessel and to the lower end of which a curved tube (6) is fixed, said tube extending internally up to the upper region (22) of the plunger piston (4).
2. Lifting platform according to Claim 1, characterized in that the cavities of the two plunger pistons (4) store the necessary hydraulic fluid for extending the cylinder tubes.
3. Lifting platform according to Claim 1, characterized in that both plunger pistons (4) in each case have at the lower end of the plunger pistons (24) an opening (6a) for compressed air (26) and an opening (7a) for the hydraulic fluid (27), each of said openings having a connection possibility (7) (8) for a pipe or hose.
4. Lifting platform according to Claim 1, characterized in that the hydraulic fluid (27) is preferably water or

an aqueous liquid or some other organic liquid, for example alcohol.

5. Lifting platform according to Claim 1, characterized in that between the openings (7a) of the plunger pistons (4) and the openings (8a) of the cylinder tubes (3) there is a pipe or hose connection (11, 12), between which at least one hydraulic valve (9) is arranged.
6. Lifting platform according to Claim 1, characterized in that the hydraulic fluid (27) flows between the cavities of the plunger pistons (4) and the cavities of the cylinder tubes (3).
7. Lifting platform according to Claim 1, characterized in that compressed air (26) flows through the curved tube (6).
8. Lifting platform according to Claim 1, characterized in that, during the lowering operation, the air flowing out is fed back into the installation bay (1) through the line (14) and the sound absorber (29).
9. Lifting platform according to Claim 1, characterized in that the pressurized discharged air is at least partially either fed to a pneumatic accumulator or made available to the pressure generator as pressurized intake air.
10. Lifting platform according to Claim 1, characterized in that a container is fitted at the end of the line (14) and after the sound absorber (29), in order to receive small amounts of hydraulic fluid.
11. Lifting platform according to Claim 1, characterized in that the surface of the hydraulic fluid (27.1) in the plunger pistons (4) in the retracted state reaches as far

as close to the upper edge of the opening (6a) of the curved tube (6).

12. Lifting platform according to Claim 1, characterized in that the at least partially filled pneumatic pressure accumulator discharges at least some of its compressed air again during the next lifting operation.

KEY TO FIGURES

Senken = Lowering

0-Stellung = 0 position

Heben = Lifting

Netzdruck = Network pressure

Pneumatik-Steuerkreis = Pneumatic control circuit

Hydraulik-Arbeitskreis = Hydraulic operating circuit